

# **NAS NORTH ISLAND - NAVY REGION SOUTHWEST NAVY ENVIRONMENTAL LEADERSHIP PROGRAM**

## **CONSERVATION**

### **SOLID WASTE REDUCTION**

#### **LEAD ACTIVITY**

Naval Air Station (NAS) North Island

#### **STATUS**

Active

#### **MISSION**

Reduce solid waste and divert waste from landfills to recycling programs

#### **REQUIREMENT**

Federal agencies are directed under Executive Order 12873 to reduce waste through solid waste prevention and recycling programs. Different methods and technologies are needed to reduce waste or improve processes already in place to save money.

#### **DESCRIPTION**

In an effort to comply with Executive Order 12873, the recycling center at NAS North Island currently uses the following technologies for solid waste reduction: can crusher/baler, drum crusher, trash compactor, and paper conveyor sorter. Some technologies soon to be implemented are an oil filter crusher and wood tub grinder. Two high-volume waste streams at NAS North Island are 55-gallon steel drums and 1-to 5-gallon steel cans and pails from galleys and hazardous materials facilities. Uncrushed drums take up more space and require more labor hours to handle than crushed drums. The drum crusher reduces a drum to a 7-inch disk, approximately one-fifth of its original size for an 80 percent reduction in volume. The can crusher/baler effectively eliminates cans and pails from the solid waste stream by compressing them into 500-pound bales. The baled cans and pails and crushed drums are then sold to a local recycler which accepts them only in this form. The cans, pails, and drums to be crushed may need to be monitored to ensure they meet recycling acceptance criteria for cleanliness, previous use, and residues. By using the can crusher/baler and drum crusher, NAS North Island eliminates the need for space for stockpiling the cans, pails, and drums and instead includes them in its regular steel bin for metals recycling. They are now considered scrap metal, a highly recyclable commodity.

Prior to receiving the trash compactor, the NAS North Island recycling center used five, 40-cubic-yard roll-off trash containers. Now the recycling center only needs one roll-off container, saving \$52,000 annually. With the implementation of the paper conveyor sorter, the number of laborers sorting various paper products for recycling purposes was reduced from seven to four, at an annual savings of \$55,000.

NAS North Island is in the process of setting up an oil filter recycling program at the center. Currently all oil and hydraulic filters are disposed of through the hazardous waste process. The oil filter crusher reduces approximately seven to eight filters to a three-inch cube of scrap metal. In addition, crushing the filters squeezes out the oil, which is then recycled. The remaining metal is included in the regular steel bins for scrap metal recycling. Using this process is estimated to save \$80,000 annually.

An electrically-powered wood tub grinder will soon be implemented at NAS North Island. NAS North Island chose to implement an electric wood tub grinder, in order to meet air pollution requirements. Based on a solid waste generation study performed at NAS North Island, the annual wood waste volume is 1,089 tons, which is disposed of at the Miramar landfill. Once the Wood Tub Grinder is implemented, the wood waste will be diverted as a recycled commodity, such as mulch or compost, for an annual savings of \$22,000. In addition, this technology will enable NAS North Island to achieve the 50 percent recycling and 50 percent solid waste disposal goals mandated in Executive Order 12873.

### **BENEFITS**

- Saves as well as generates money
- Reduces manpower needed
- Turns waste into a recyclable commodity
- Reduces volume of solid waste stream

### **ACCOMPLISHMENTS/CURRENT STATUS**

<b>Date</b>	<b>Activity</b>
APR 1995	Can crusher/baler implemented
SEP 1995	Trash compactor implemented
MAY 1996	Paper conveyor sorter implemented
FEB 1998	Drum crusher implemented
JAN 1999	Planned installation of the oil filter crusher
APR 1999	Planned installation of the wood tub grinder

### **FUTURE PLAN OF ACTION & MILESTONES**

<b>Date</b>	<b>Activity</b>
APR 2002	Scheduled to commence a regional-wide waste assessment and characterization studies to identify possible ways to maximize landfill diversion
Ongoing	Continue analysis of technologies and methods to help maximize landfill diversion

### **COLLABORATION/TECHNOLOGY TRANSFER**

Solid waste reduction systems were obtained through the Pollution Prevention Equipment Program (PPEP).

### **BIBLIOGRAPHY**

- [Office of the Federal Environmental Executive Web Page](#)

#### **RELATED GOVERNMENT INTERNET SITES**

[Office of the Federal Environmental Executive Web Page](#)

[PPEP Book-Solid Waste Reduction Systems](#)

#### **RELATED NAVY GUIDEBOOK REQUIREMENTS**

- 10003 Cost Effective Waste Reduction

*Updated: 03/01/02*